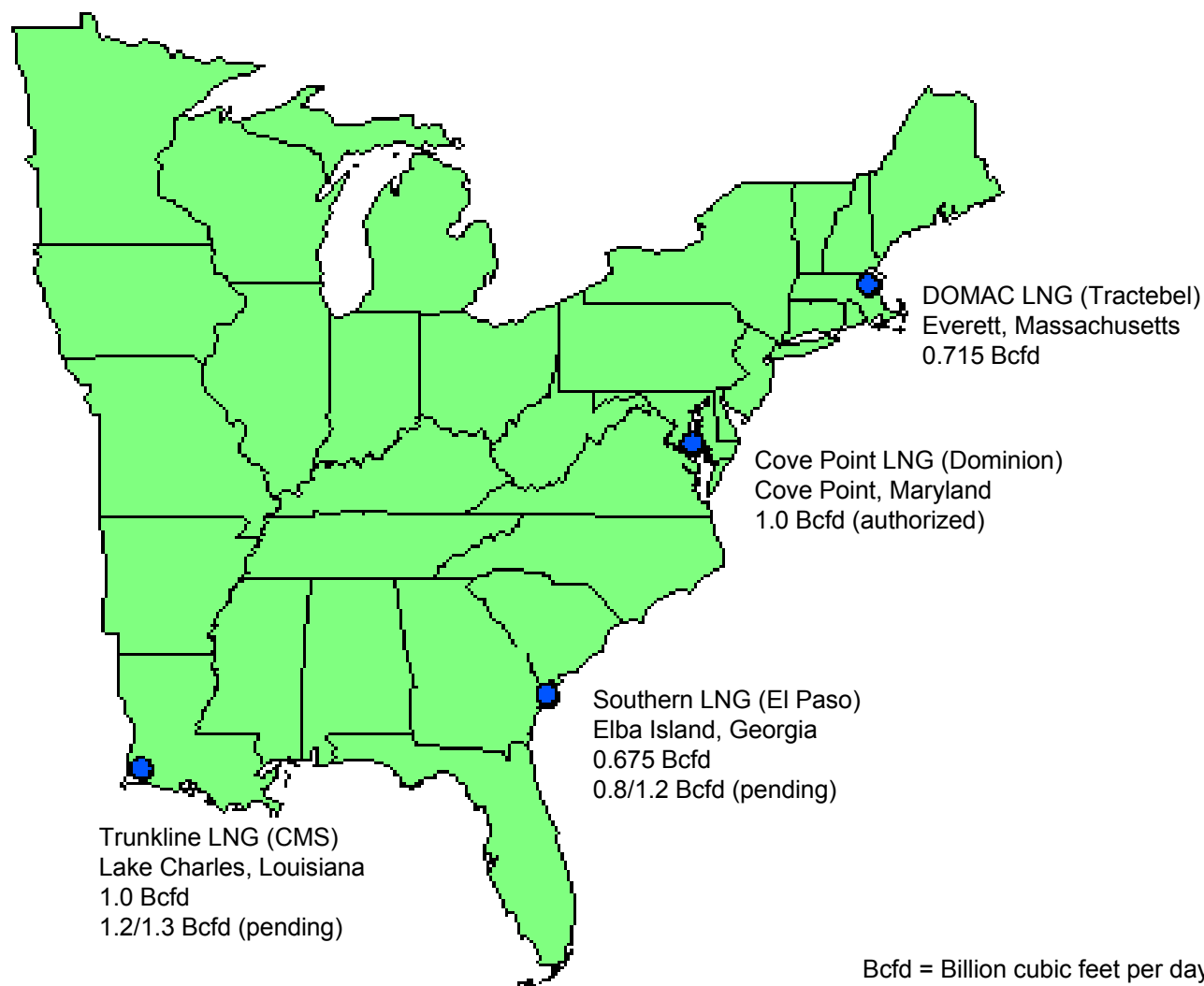


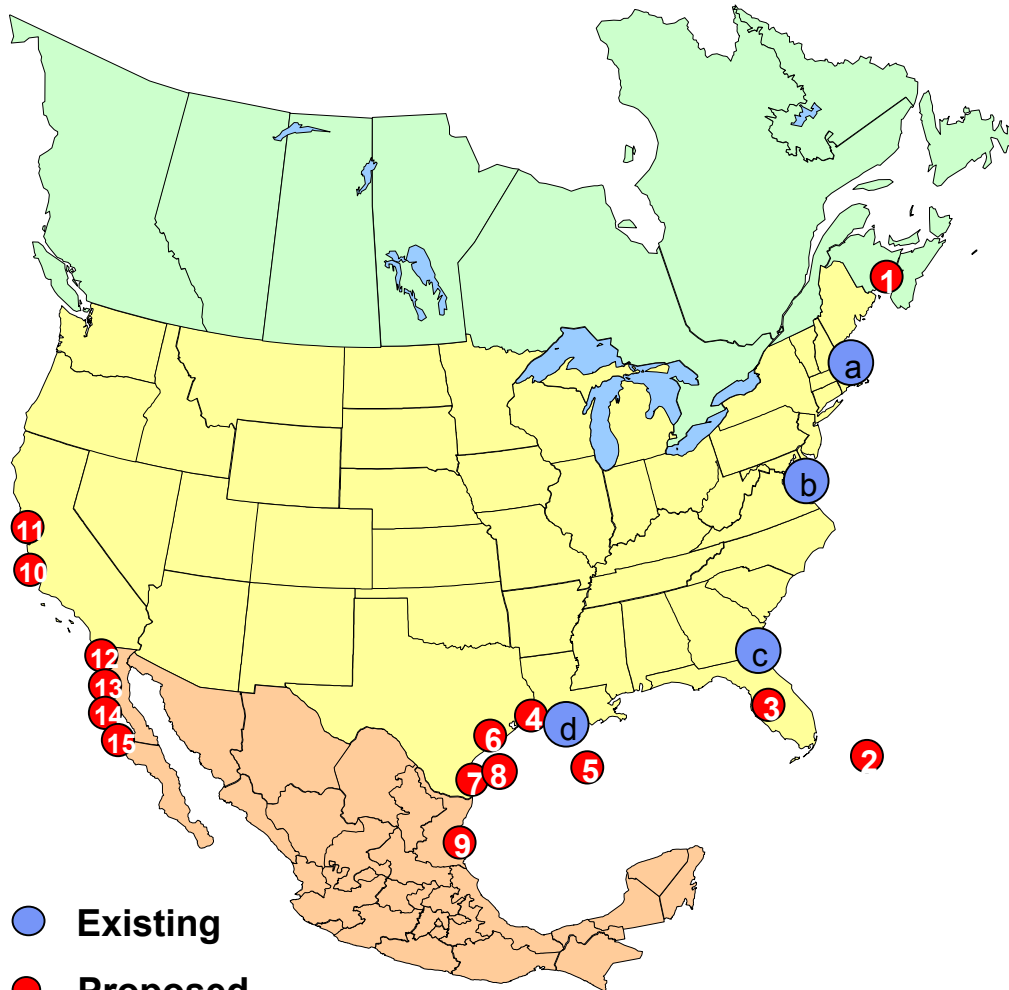
Liquefied Natural Gas Imports

Robert Cupina, Deputy Director
Office of Energy Projects, FERC

Liquefied Natural Gas Import Facilities in the United States



Existing and Proposed LNG Import Terminals



Existing Terminal Expansions

- a. Everett, MA: 0.715 Bcfd (Tractebel)
- b. Cove Point, MD: 1.0 Bcfd (Dominion)
- c. Elba Island, GA: 1.2 Bcfd (El Paso)
- d. Lake Charles, LA: 1.3 Bcfd (CMS)
- e. Guayanilla Bay, P.R.: 0.093Bcfd (Eco Electrica)

Proposed Terminals

- 4. Hackberry, LA: 1.5 Bcfd, 2006 (Dynergy)

Planned Terminals

- 1. St. John, NB: 0.5 Bcfd, 2005+(Irving Oil)
- 2. Bahamas: 0.5 Bcfd, 2005 (Enron/ El Paso)
- 3. Tampa, FL: 0.5 Bcfd, 2005+(BP)
- 5. Gulf of Mexico: 1 Bcfd, 2005 (Chevron Texaco)
- 6. Freeport, TX: 0.55 Bcfd, 2005+ (Cheniere LNG Partners)
- 7. Brownsville, TX: 0.55 Bcfd, 2006 (Cheniere LNG Partners)
- 8. Corpus Christi, TX: 0.55 Bcfd, 2005+ (Cheniere LNG Partners)
- 9. Altamira, Tamulipas: 0.5-1 Bcfd, 2004 (El Paso)
- 10. California: 0.5 Bcfd, 2005 (Chevron Texaco)
- 11. Mare Island, CA: 1.3 Bcfd, 2008 (Shell)
- 12. Baja California: 0.7 Bcfd, 2005 (El Paso)
- 13. Baja California: 1.0 Bcfd, 2005 (Marathon)
- 14. Baja California: 0.5 Bcfd, 2005 (Chevron Texaco)
- 15. Baja California: 1.0 Bcfd, 2005 (CMS Energy)

FERC Approval Process

Economic Oversight of LNG Terminal Services:

Open Season, Open Access, Rate Design,
Public Need / Public Interest

LNG Terminal Siting:

Safety, Security, Environment, Plant Design

Department of Energy

Authorization to import the LNG commodity
Based on US energy policy

Environmental Review

Notice of Intent



Scoping Meetings
& Site Visit



Data Requests
Analysis
Agency Coordination



DEIS



FEIS

Cryogenic Design &
Safety Review



Tech Conference
(Optional)



Public Interest Review

Notice of Application



Interventions
Protests



Data Requests
Analysis



Preliminary Determination
(Optional)



Authorization

Liquefied Natural Gas Imports

Economic Oversight



Currently FERC's Open Access Policy Applies to LNG Terminals

- Capacity cannot be allocated by an LNG operator among its customers on an “unduly discriminatory basis ”
- Thus, project sponsor needs to hold an open season for initial capacity allocation
- If initial subscribers exceed available capacity, then capacity is pro rationed, if the project cannot be expanded

Review of Open Access Policy for LNG

Docket No. PL02-9, Natural Gas Markets Conference

- Review Announced Sept. 26, 2002
- Conference Held Oct. 25, 2002
- Written Comments Accepted up to Nov. 15, 2002

The Commission recognizes that :

- LNG imports will become a key supply source in the U.S.
- It may be time to reexamine existing policies and regulatory goals in order to remove unnecessary barriers to the development of LNG terminals

Cost Control and Rate Design

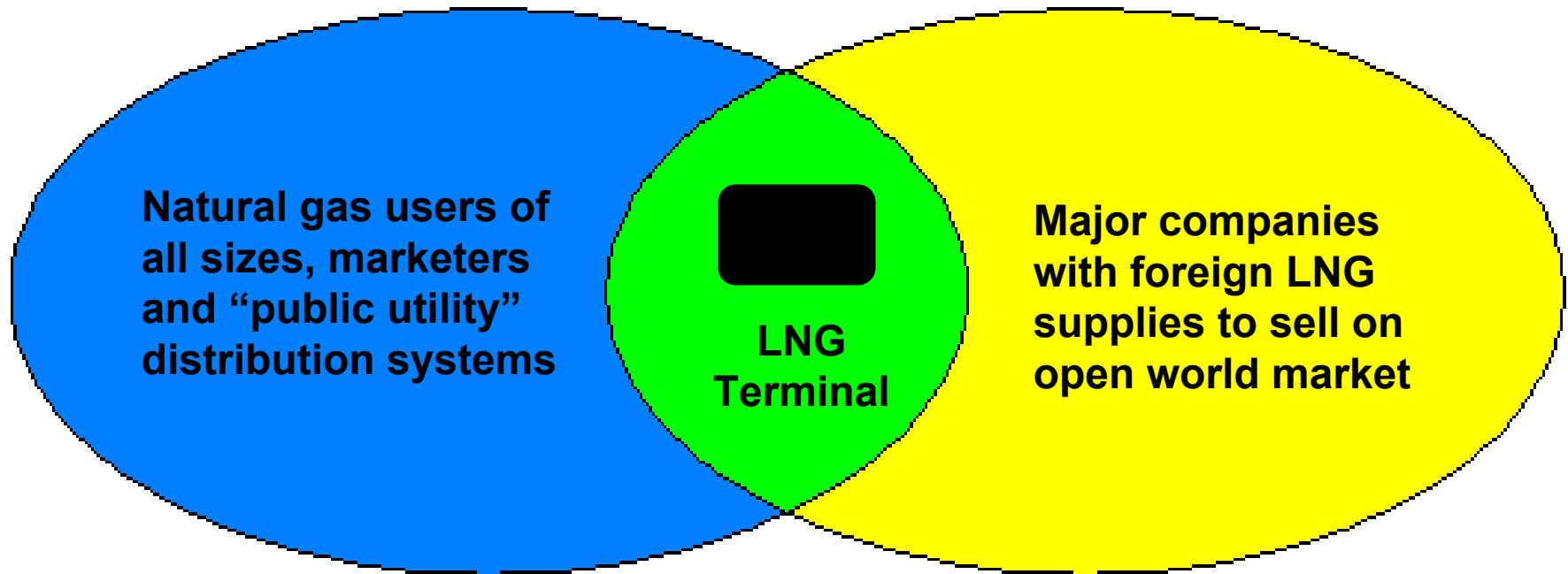
Cost-Based Rates: Full Review

- LNG Terminal Operator has regulatory guarantee of opportunity for cost recovery, BUT limits on profitability
- All rate increases must be approved; customers have rights to seek prospective rate decreases by order of the Commission

Market-Based Rates: No Review After Initial Market Power Analysis

- LNG Terminal Operator has NO regulatory guarantee of opportunity for cost recovery, NO limits on profitability
- Commission must find that LNG Terminal Function does not have Market Power
- All rate increases or decreases controlled solely by LNG Terminal Operator and customer negotiations.

Regulatory Approaches to the Commercial / Economic Function of LNG Terminals



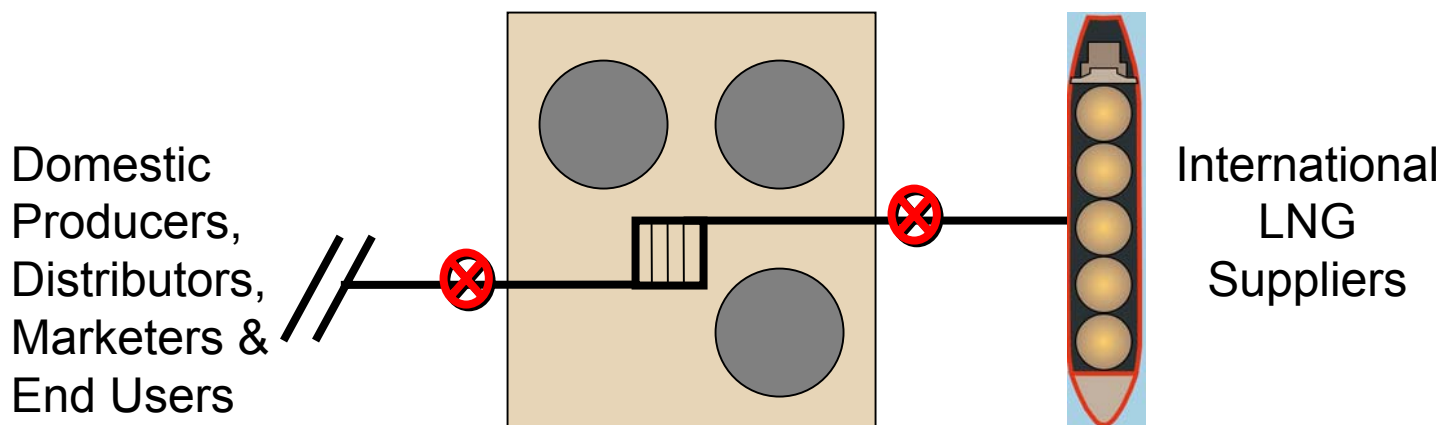
Interstate Commerce – Section 7 Analog

- Customer choice / open access “public utility” system model
- Traditional Cost-Based Rates or Market-Based Rates
- Full Open Access Tariff / Open Season
- Certificate / Public Need Policy applies

Foreign Commerce – Section 3

- International Proprietary LNG Supply System Model
- No Cost & Rate Oversight: Product competes with unregulated domestic supply
- Third Party Access at Operator’s Discretion
- Certificate/Public Need Policy does not apply

Two Transfer Points for Access



Open Access Required Here at Delivery of Vapor to Interstate Pipeline System

Favors single owner of LNG Supply

- Natural gas sold at domestic price
- Only single LNG supplier selling
- Cost of Terminal Services masked
- Terminal capacity release at operator's discretion
- Terminal scheduling controlled by operator

Open Access Required Here at Delivery of Liquid to Terminal

Favors multiple LNG suppliers

- Open season for terminal services
- LNG landed at world prices
- Multiple LNG suppliers selling
- Cost of Terminal Services known
- Terminal capacity release transparent
- Terminal scheduling controlled by tariff

Liquefied Natural Gas Imports

Siting, Safety, Security,
and the Environment



Elements of FERC Site Review

- Environmental Review under NEPA
- Cryogenic Design & Technical Review
- Post-Authorization Inspection Program

Environmental Document (EA or EIS)

- Environmental Issues – endangered species, essential fish habitat, wetlands, dredging, air emissions, and coastal zone consistency
- Safety Exclusion Zones – fires and flammable vapor clouds from design spills
- Marine Safety – Coast Guard operating plans, vessel traffic congestion
- Seismic Review – detailed facility analysis in high seismic zones
- Terrorism and Security – coordination with Coast Guard and Office of Pipeline Safety

Cryogenic Design & Technical Review

- Design of plant equipment, instrumentation, and controls.
- Hazard detection, hazard control, and spill containment.
- Vapor cloud and radiation exclusion zones.
- Compliance with Department Of Transportation and National Fire Prevention Association safety requirements.
- Operational reliability and security.

Biennial LNG Site Inspections

- Physically inspect the condition of all major plant equipment
- Review plant operations, maintenance, and problems identified in semi-annual reports for prior 2 years
- Inspect changes in plant design, operations, and safety systems
- Inspect plant security measures
- Document findings in standard *Cryogenic Design and Inspection Manual*
- Investigate plant accidents

Remote Siting vs. Market Area

What is the Market and Where?

- Winter heating load
- Summer cooling load
- New combined cycle power plants

Obstacles to Market-area siting:

- Greenfield sites – availability; land use/environmental compatibility; public concerns
- Brownfield sites – site and dredge spoil contamination; vessel traffic congestion
- Offshore sites – technology; pipeline landfall; potential Deepwater Ports Act amendments